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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,213	11/07/2003	Clifford F. Knollenberg	IRIS.P0001	2926

23349 7590 05/31/2005

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EXAMINER
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KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/705,213

**Applicant(s)**

KNOLLENBERG ET AL.

**Examiner**

Bradley T King

**Art Unit**

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of species 1, subspecies B in the reply filed on 3/1/2005 is acknowledged. The traversal is on the ground(s) that the restriction between the subspecies is not proper since they are not distinct. Applicant's arguments are persuasive. The subspecies election requirement is withdrawn. Applicant's election without traverse of species 1 is noted. All current claims are readable on the elected species.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Please shorten the abstract.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 5 has been added through preliminary amendment after filing of the application. Claim 5 requires "a length dimension having a value equal to or greater than 5um." The original disclosure fails to support the open-ended range. Also note *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Drake et al (US# 6128122).

Drake et al discloses all the limitations of the instant claims including; an actuator body 220 connected with a suspension system; and the suspension system connected with the substrate 346, the suspension system comprising: a set of one or more flexures 306, each flexure connecting the actuator body 220 with the substrate 346; and a set of one or more torsional elements 306, wherein each torsional element connects a corresponding flexure with the actuator body and provides strain relief between the corresponding flexure and the actuator body. See figure 14 and note the portion labeled 441 has a thinner cross-section than the portion adjacent the platform 220.

Regarding claim 4, see figure 15. The linear spring constant provided by the hinges (torsional elements) converts to a  $\theta/\text{Nm}$  of greater than  $7.00\text{E}+06$ .

Regarding claims 5-6, see figure 15.

Claims 2-3, 7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/55666.

WO 00/55666 discloses all the limitations of the instant claims including; an actuator body 108 connected with a suspension system; and the suspension system connected with the substrate 102, the suspension system comprising: a set of one or more flexures 100, each flexure connecting the actuator body with the substrate 102; and a set of one or more torsional elements 112, wherein each torsional element connects a corresponding flexure with the actuator body and provides strain relief between the corresponding flexure and the actuator body. See figure 12.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drake et al (US# 6128122).

Drake et al discloses all the limitations of the instant claims with exception to the torsion element being a serpentine form. Drake et al instead shows a bar shaped torsion element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a serpentine shaped torsion element in the device of Drake et al as an obvious design variant. Also note applicant's response of 3/1/2005 states that subspecies A and B are not patentably distinct:

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/55666.

WO 00/55666 discloses all the limitations of the instant claims with exception to the torsion element being a serpentine form. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a serpentine shaped torsion element in the device of WO 00/55666 as an obvious design variant. Also note

Art Unit: 3683

applicant's response of 3/1/2005 states that subspecies A and B are not patentably distinct.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dummermuth et al, Foote and Miles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Robert A. Siconolfi* 5/25/05  
ROBERT A. SICONOLFI  
PATENT EXAMINER

BTK